

CLAIMS

- 5 1. A method in a User Equipment, UE, for initiating a data transfer from the UE in a UMTS terrestrial radio access network, UTRAN, wherein the UTRAN comprises at least one Radio Network Controller, RNC, connectable to the UE that is capable of being in the states URA PCH, CELL PCH or CELL DCH, **characterised in** that the method
- 10 comprises the steps of:
- introducing delay reducing information in a data transfer initiating message by the UE,
- transmitting the data transfer initiating message by the UE,
- receiving a message from the RNC comprising information for
- 15 transferring the UE from the URA PCH or the CELL PCH state directly to the CELL DCH state by means of the delay reducing information in the data transfer initiating message.
2. The method according to claim 1, wherein the data transfer initiating
- 20 message is an uplink cell update message transmitted by a UE.
3. The method according to any of claims 1-2, wherein the delay reducing information comprises information if the traffic volume of the data to be transmitted is above a pre-configured threshold.
- 25 4. The method according to claim 3, wherein the delay reducing information further comprises information whether the data to be transmitted is available on a user bearer or on a signalling bearer.
- 30 5. The method according to any of claims 2-4, wherein the delay reducing information is indicated in an extension of the cell update message.
- 35 6. The method according to claim 5, wherein the extension comprises at least one dedicated flag.

7. The method according to any of claims 2-4, wherein the extension comprises currently reserved code points, i.e. spare values in the existing cell update message.
- 5 8. The method according to any of claims 2-7, wherein the step of receiving a message from the RNC comprises the further step of:
- receiving a cell update confirm message from the RNC, and
 - transmitting a Radio Bearer configuration complete message to the RNC.
- 10 9. A method in a Radio Network Controller, RNC, for initiating a data transfer from the RNC in a UMTS terrestrial radio access network, UTRAN, wherein the UTRAN comprises at least the RNC connectable to a User Equipment, UE, that is capable of being in the states URA
- 15 PCH, CELL PCH or CELL DCH, **characterised in** that the method comprises the steps of:
- introducing delay reducing information in a data transfer initiating message by the RNC,
 - transmitting the data transfer initiating message by the RNC,
 - 20 -transmitting a further message from the RNC comprising information for transferring the UE from the URA PCH or the CELL PCH state directly to the CELL DCH state by means of the delay reducing information in the data transfer initiating message.
- 25 10. The method according to claim 9, wherein the data transfer initiating message is a downlink paging message transmitted by the UTRAN.
- 30 11. The method according to any of claims 9-10, wherein the delay reducing information comprises any of the information parameters: physical- and transport channel configuration parameters, code allocation and radio bearer configuration, and the identity parameter U-RNTI.
- 35 12. The method according to claim 11, wherein the delay reducing information further comprises at least an uplink Dedicated Physical Channel, DPCH, related information, a downlink DPCH related

information, downlink radio link related information, power control configurations or potential High speed downlink shared channel, HS-DSCH, configurations.

5 13.The method according to any of claims 11-12, comprising the further step of: indicating the delay reducing information in an extension of the paging message.

10 14.The method according to claim 13, comprising the further step of: indicating the delay reducing information in said extension explicitly.

15 15. The method according to claim 13, comprising the further step of: indicating the delay reducing information in said extension by means of a pointer to a previously transmitted downlink message, wherein the previously transmitted downlink message comprises the delay reducing information.

20 16.The method according to any of claims 10-14, wherein the transferring step comprises the step of:
-receiving a Radio Bearer re-configuration complete message from the UE.

25 17.A method in a Radio Network Controller, RNC, for initiating a data transfer from the RNC in a UMTS terrestrial radio access network, UTRAN, wherein the UTRAN comprises at least the RNC connectable to a User Equipment, UE, that is capable of being in the states URA PCH, CELL PCH or CELL DCH, comprising the step of:
-transmitting a paging message on a paging channel, PCH, to the UE,
-receiving a cell update message from the UE,
30 the method is **characterised in** the further steps of:
-transmitting a cell update confirm message on a Forward Access Channel, FACH, and
-transferring the UE from the URA PCH or the CELL PCH state directly to the CELL DCH state.

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18.A User Equipment, UE, (108) connectable to a Radio Network Controller, RNC, (102) in a UMTS network, wherein the UE (108) is capable of being in the states, URA PCH, CELL PCH, CELL FACH or CELL DCH, comprising means for handling a data transfer initiating message,

characterised by

means for introducing delay reducing information in a data transfer initiating message,

a transmitter for transmitting the data transfer initiating message,

a receiver for receiving a message from the RNC (102) comprising information for transferring the UE (108) from the URA PCH or the CELL PCH state directly to the CELL DCH state by means of the delay reducing information in the data transfer initiating message.

19.The UE according to claim 18, wherein the data transfer initiating message is an uplink cell update message transmitted by a UE.

20.The UE according to any of claims 18-19, wherein the delay reducing information comprises information if the traffic volume of the data to be transmitted is above a pre-configured threshold.

21.The UE according to claim 20, wherein the delay reducing information further comprises information whether the data to be transmitted is available on a user bearer or on a signalling bearer.

22.The UE according to any of claims 19-21, wherein the delay reducing information is indicated in an extension of the cell update message.

23.The UE according to claim 22, wherein the extension comprises at least one dedicated flag.

24. The UE according to any of claims 19-21, wherein the extension comprises currently reserved code points, i.e. spare values in the existing cell update message.

25. The UE according to any of claims 19-24, wherein the receiver for receiving a message from the RNC further comprises means for receiving a cell update confirm message from the RNC, and means for transmitting a Radio Bearer configuration complete message to the RNC.
26. The UE according to claim 18, wherein the data transfer initiating message is a downlink paging message transmitted by the RNC.
27. The UE according to any of claims 18, 26 wherein the delay reducing information comprises any of the information parameters: physical- and transport channel configuration parameters, code allocation and radio bearer configuration, and the identity parameter U-RNTI.
28. The UE according to claim 27, wherein the delay reducing information further comprises at least an uplink Dedicated Physical CHannel, DPCH, related information, a downlink DPCH related information, downlink radio link related information, power control configurations or potential High speed downlink shared channel, HS-DSCH, configurations.
29. The UE according to any of claims 26, wherein the delay reducing information is indicated in an extension of the paging message.
30. The UE according to claim 29, wherein the delay reducing information is indicated in the extension explicitly.
31. The UE according to claim 29, wherein the delay reducing information is indicated in the extension by means of a pointer to a previously transmitted downlink message, wherein the previously transmitted downlink message comprises the delay reducing information.
32. The UE according to any of claims 26-31, wherein the transmitter comprises means for transmitting a Radio Bearer re-configuration complete message from the UE.

33.A User Equipment, UE, (108) connectable to a Radio Network Controller, RNC, (102) in a UMTS network, wherein the UE (108) is capable of being in the states, URA PCH, CELL PCH, CELL FACH or CELL DCH, comprising means for receiving a paging message on a
5 paging channel, PCH, from the RNC, means for transmitting a cell update message to the RNC, **characterised by** means for receiving a cell update confirm message on a Forward Access Channel, FACH, and means for transferring the UE from the URA PCH or the CELL PCH state directly to the CELL DCH state.

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34.A Radio Network Controller, RNC, (102) connectable to a UMTS network and to a plurality of User Equipments, UEs, (108) wherein the UEs are capable of being in the states, URA PCH, CELL PCH, CELL FACH or CELL DCH, comprising means for handling a data
15 transfer initiating message,
characterised by means for introducing a delay reducing information in the data transfer initiating and means for transferring the UE from the URA PCH or the CELL PCH state directly to the CELL DCH state by means of the delay reducing information in the data
20 transfer initiating message.

35.The RNC according to claim 34, wherein the data transfer initiating message is an uplink cell update message transmitted by a UE.

25 36.The RNC according to any of claims 34-35, wherein the delay reducing information comprises information if the traffic volume of the data to be transmitted is above a pre-configured threshold.

30 37.The RNC according to claim 36, wherein the delay reducing information further comprises information whether the data to be transmitted is available on a user bearer or on a signalling bearer.

35 38.The RNC according to any of claims 35-37, wherein the delay reducing information is indicated in an extension of the cell update message.

39. The RNC according to claim 38, wherein the extension comprises at least one dedicated flag.

40. The RNC according to any of claims 38, wherein the extension comprises currently reserved code points, i.e. spare values in the existing cell update message.

41. The RNC according to any of claims 34-40, wherein the RNC comprises means for transmitting a cell update confirm message to the UE, and receiving a Radio Bearer configuration complete message from the UE.

42. The RNC according to claim 34, wherein the data transfer initiating message is a downlink paging message transmitted by the RNC.

43. The RNC according to any of claims 34, 42, wherein the delay reducing information comprises any of the information parameters: physical- and transport channel configuration parameters, code allocation and radio bearer configuration, and the identity parameter U-RNTI.

44. The RNC according to claim 43, wherein the delay reducing information further comprises at least an uplink Dedicated Physical Channel, DPCH, related information, a downlink DPCH related information, downlink radio link related information, power control configurations or potential High speed downlink shared channel, HS-DSCH, configurations.

45. The RNC according to any of claims 34, further comprising means for indicating the delay reducing information in an extension of the paging message.

46. The RNC according to claim 45, further comprising means for indicating the delay reducing information in the extension explicitly.

47. The RNC according to claim 42, further comprising means for indicating the delay reducing information in the extension by means

of a pointer to a previously transmitted downlink message, wherein the previously transmitted downlink message comprises the delay reducing information.

- 5 48. The RNC according to any of claims 42-47, further comprising means for receiving a Radio Bearer re-configuration complete message from the UE.
- 10 49. A Radio Network Controller, RNC, connectable to a UMTS network and to a plurality of User Equipments, UEs, wherein the UEs are capable of being in the states, URA PCH, CELL PCH, CELL FACH and CELL DCH, comprising means for transmitting a paging message on a paging channel, PCH, to the UE, means for receiving a cell update message from the UE, **characterised by** means for transmitting a cell
- 15 update confirm message on a Forward Access Channel, FACH, and means for transferring the UE from the URA PCH or the CELL PCH state directly to the CELL DCH state.